

# details

## ARGUS<sup>®</sup> 42

ADSL2/2+, ISDN\*, POTS\* and copper tester  
VoIP\* and download\* tests on ADSL and Ethernet  
(Version: 03 / 2008)

### One tester for all requirements

- ADSL modem (ATU-R) emulation (Annex A, M and Annex B)
- ATM-\*/IP\*-Layer tests via ATM-\*/IP-Ping\* and VPI/VCI-Scan, displaying of ATM\* and Ethernet statistics\*, bridge mode\*
- Download test for throughput determination (using HTTP)
- VoIP phone emulation\* on ADSL and Ethernet, incl. acoustics
- VoIP analysis for an objective quality assessment
- ISDN BRI TE simulation\*, tests ISDN BRI leased line\*
- Operates at ISDN BRI U interface (2B1Q or 4B3T)\*
- POTS: Powerful POTS tester with CLIP display\*
- 2-wire high-Z monitor with DTMF and CLIP decode\*
- Non-intrusive, passive DSL / high frequency traffic detection\*
- RC measuring, including loop length calculation
- Easy-to-operate, user defined and predefined test scenarios
- Internally charged AA rechargeable batteries or mains powered
- Fully automated access tests and test reports for documentation
- Free software updates by download from [www.argus.info](http://www.argus.info)
- Rugged and ergonomic handheld design
- Compatible with WINplus / WINanalyse\*

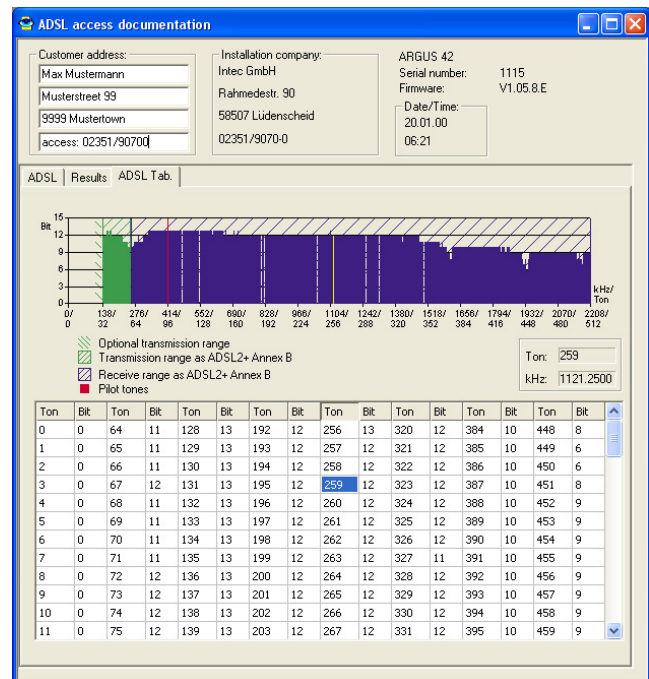


ARGUS<sup>®</sup>42 allows the installer to confirm that the promised ADSL service is being properly delivered to the subscriber. Determine the ADSL Quality-of-Service automatically within seconds by receiving the connection rates and noise margins from the DSLAM at the customer. Check through the network if the wiring does allow DSL service by connecting the rechargeable battery powered ARGUS<sup>®</sup> at various points - at the end point, at the junction box, at the cross box - and optimise the local loop.

See the ADSL transmission spectrum on the graphics screen and find degraded spectral regions by interfering noise sources.

The proper ISP connection can be inspected by establishing a PPP, an EoA or an IPoA connection, further an IP-Ping\* test or a HTTP download test\* can be executed.

ARGUS<sup>®</sup>42 offers a comprehensive VoIP\* terminal simulation, which enables it to evaluate the speech quality of VoIP\*, POTS\* or ISDN\* connections, this upgrades ARGUS<sup>®</sup>42 to a real voice tester. In addition ARGUS<sup>®</sup>42 allows ISDN\* testing on BRI S/T\* and U\* interfaces in a TE or leased line operation mode, as well testing POTS\* is possible. All other impairments of the local loop will be detected by the RC measuring function.



(ADSL access test report viewed by WINplus)

### ARGUS<sup>®</sup>42 - ADSL2+ / ADSL2 / ADSL interface functions

- ATU-R simulation for ADSL, ADSL2, ADSL2+
- Standards supported: ANSI T1.413.2, ITU-T G.992.1 (G.DMT) Annex A / B, G.992.2 (G.Lite), G.992.3 Annex A / B / L / M App. 1, G.992.4 Annex A / B App. 1 and G.992.5 Annex A / B / M
- ADSL over POTS (Annex A), ADSL over ISDN (Annex B) or both in the same tester, support of Annex M ist available, too
- Automatically measures and displays the following upstream and downstream parameters of the line:
  - ATM maximum bit rates, ATM fast or interleaved bit rates
  - Relative capacity (percent)
  - Noise margin, output power, line attenuation, interleave depth
  - On-screen bits/ton and SNR/ton histogram
- ATM cell and bit error statistics (upstream/downstream):
  - CRC (Cyclic Redundancy Check)
  - FEC (Forward Error Correction)
  - HEC (Header Error Checksum)
  - Fast / interleaved bit error and errored seconds

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- Further useful ADSL connection parameters in the test report\*
- ARGUS®42 also displays the manufacturer of the ATU-C
- Supports ATM-OAM-Loop

## ARGUS®42 - ADSL bridge mode\*

- 10/100 Base-T Ethernet interface
- Displaying of Ethernet statistics

## ARGUS®42 - ATM layer test\*

- Verify the proper ATM layer configuration by executing the following tests:
- VPI/VCI scan returns list of available VPI/VCI
- ATM-OAM-Ping (end-to-end or segmented)
- Displaying of ATM statistics

## ARGUS®42 - IP functions\*

Test the internet connectivity to the ISP by establishing a PPP, EoA or IPoA connection:

- Ping test via ADSL interface, test of response time analysis: display of the sent, received and lost packets
- Ping test via Ethernet interface to evaluate the connection to a PC or a router
- VLAN support (VLAN ID configurable)
- Displaying of Ethernet statistics

## ARGUS®42 - HTTP download test\*

Test the internet connectivity to the ISP by establishing a PPP, EoA or IPoA connection:

- HTTP download on ADSL, determination of real data throughput
- HTTP download on Ethernet interface to evaluate the connection to a PC or a router
- VLAN support (VLAN ID configurable)
- Displaying of Ethernet statistics

## ARGUS®42 - VoIP phone emulation\* / VoIP analysis\*

- VoIP phone emulation\*, (SIP based IP telephony), includes:
  - VoIP phone emulation\*, including real acoustics
  - Support of codecs G.711 a-law and  $\mu$ -law
  - Simulation of incoming and outgoing SIP calls
  - All required simulation parameters configurable
  - Displays important parameters of the connection
- VoIP analysis function\* (extended option), requires VoIP phone emulation\*, additionally includes:
  - Support of codecs G.726 and iLBC
  - Jitter buffer adaptiv, user-defined Jitter buffer size
  - Displays all parameters of the connection, e. g. the used codec
  - Displays detailed VoIP statistics (RTP statistics)
- SIP status log

## ARGUS®42 - BRI S/T interface functions\*

- BRI interface in accordance with ITU-T I.430
- Operates as TE (terminal simulation), leased line (slave mode)
- Automatic detection of access configuration and protocol:
  - Point-to-point (P-P) or point-to-multipoint (P-MP)
  - DSS1 or no protocol
  - further protocols: Cornet-T / N / NQ, QSIG, VN
- Display of layers 1-2-3 and the B channel status
- Automated test scenarios for access verification and saving the data in device to create an access test report\*
- Automatic ISDN service test: determines which ISDN services are available on the send and receive sides of the access
- Automatic test of the supplementary services
  - for DSS1: autom. tests of CLIP, CLIR, COLP, COLR, CFU, CFB, CFNR, CCBS, CCNR, AOC-D/E, ECT, 3PTY, DDI, SUB, MSN, MCID, CUG, CW, HOLD, TP, CD, UUS for incoming calls, support of keypad protocol
- Bus status test with interrogation, display and clearing of the active call diversions CFU, CFB, CFNR for all services
- Automatic X.31(D) Test:
  - „Packet data in D channel“ available?
  - Automatic detection of the TEIs activated in frame handler
  - Simulation of X.31(D) terminal to X.25 network
- Telephone functions with a call-hot-button:
  - calling and called number by incoming calls,
  - B channel, ISDN service, SUB address and UUS-1 data
  - during call: AOC-D in currency or charging units, displays info elements,
  - at end of call: AOC-E in currency or charging units, clearing cause by number/text incl. location
- Call number memory for 10 numbers or keypad protocol commands
- Selectable B channel, en-bloc or overlap signalling
- Bit error test (BERT) with evaluation in accordance to G.821
  - extended self call or end-to-end BERT
  - displays the bit error count and remaining measuring time
  - G.821 analysis: ES, EFS, SES, US, DM and OK evaluation
  - selectable service for BERT connection
  - manual injection of bit errors
  - adjustable OK/not OK bit error rate threshold and evaluation
  - test pattern in acc. to O.150: 2E11-1, 2E15-1, user defined
  - measuring time: 1 minute till infinite
  - loopbox function for B channel and all services
  - audible alarms for bit errors, LOS and LOS counter
  - receiving calls parallel to BERT possible
- Terminal simulation for different ISDN bearer and tele services
- Displays the clearing cause by number / text including location in plain text
- Tests of ISDN leased lines:
  - Telephone function and BERT, selectable B channel, loop box function for B channels, BERT in D channel

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- Layer 1 tests: measurement and evaluation of the phantom feed (OK, NORMAL or Restricted power) and the L1 receive- and send- signal level of NTBA or PBX
- Display of layer 1 infos (info 0 - info 4)
- Selectable call parameters for outgoing calls
  - type of number and numbering plan
  - screening and presentation indicator

## ARGUS®42 - U interface functions\*

- internal U interface in accordance with ETR 80 / ANSI T1.601
- Line coding: 4B3T or 2B1Q, RJ-45 with 150 Ohm
- Test in TE mode at U interface same as S/T
- Test in leased line mode at U interface same as S/T
- Measurement of U interface voltage incl. OK evaluation
- endurance testing (up to 1200 mW incl. U/I measurement)
- High-Z monitor with non-intrusive listen-to on U interface (quod vide POTS interface)

## ARGUS®42 - POTS interface functions\*

- POTS telephone function with DTMF and pulse dial mode
- Flash function (40-1000 ms)
- Loop resistance: appr. 600 Ohm
- POTS voltage measurement incl. polarity (hook-on and hook-off)
- CLIP and other caller ID services in acc. with ETS 300 659/778
- Supports display FSK and DTMF caller ID (date, time, name,...)
- adjustable DTMF signal level, signal and interval length
- High-Z monitor with non-intrusive listen-to on POTS
  - measurement of voltage incl. polarity (up to 200 V)
  - online display of CLIP, date, time,... caller ID services
  - online display of DTMF dialing tones incl. A, B, C, D, \*, #
- works as receiver for tone generators

## ARGUS®42 - RC measuring functions

- Loop resistance measurement - accuracy 4%
  - Range: 100 Ohm ...100 kOhm
  - Resolution: < 1 k: +/- 10 Ohm, > 1k: +/- 100 Ohm
- Open capacitance measurement- accuracy 5 %
  - Range: 1 nF ...1 µF
  - Resolution: 1 nF ...1 µF +/- 1/10 nF
- Non-intrusive, passive DSL / high frequency traffic detection\*
- Including loop length calculation
- Supports TRG measuring (Tip, Ring and Ground), special TRG measuring cable\* is optional

## ARGUS®42 - Acoustics:

- Automatic headset access detection
- Headset connection over jack plug
- Switchable from normal to open listening
- Handset operation mode

## Technical features:

- Power supply: alternatively supplied by standard rechargeable AA batteries or mains adaptor
- Start quickly different single tests using special hotkeys
- User configureable powermanagement
- Keypad: 16-keys, 2 cursor keys, 3 context-specific softkeys
- LC display: 4 lines with 16 characters, backlighted
- 5 LEDs to indicate status (ISDN layer 1-2-3 or ADSL sync, PC trace)
- Interfaces:
  - RJ-45 line input for POTS, ADSL, ISDN
  - RJ-11 serial interface to PC
  - jack plug socket for headset connection
- Environmental conditions:
  - operating temperature: 0° - +50 ° C
  - storing temperature: -15° - +70°
  - relative humidity: up to 95%, non-condensing
- CE marking: complies with CE directives
- User safety: EN 61010-1, EN 60950
- Standard package: tester incl. rechargeable batteries, plug-in power supply, carrying strap, carrying case, shock absorbing rubber jacket, WINplus-Software, RJ-45 cable for ADSL and manual
- Real time clock (RTC)

## \*Options:

- ADSL bridge mode (modem replacement, Ethernet statistics)
- ATM layer test (ATM OAM ping, VPI/VCI-Scan, statistics)
- IP test functions (connection setup, IP ping on ADSL / Ethernet)
- HTTP download (determines data throughput on ADSL / Eth.)
- VoIP phone emulation (standard package)
- VoIP analysis function (extended package)
- ISDN-BRI and / or POTS interface
- U interface (2B1Q or 4B3T)
- WINanalyse PC-Software package
- High frequency traffic detection
- Special TRG measuring cable
- Serial interface cable and USB serial adaptor
- integrated Serial-USB adaptor
- ARGUS® car charger
- Calibration certificate
- Headset

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